

REMARKS

This is in full and timely response to the non-final Official Action of August 28, 2007. Reexamination in light of the following remarks is respectfully requested. No new matter has been added.

Claims 1 and 2 are currently pending in this application, with claim 1 being independent.

I. Claim for the Priority

It is noted with appreciation that the Office Action has acknowledged the claim for priority.

II. Information Disclosure Statement

Applicants thank the Examiner for providing an initialed copy of form PTO/SB/08a/b, which was submitted by the Applicants on January 25, 2005.

III. Rejection under 35 U.S.C. §103(a)

Claims 1-2 are rejected under 35 U.S.C. §103(a) as being unpatentable over Williams (US 5963742 A) in view of Moore (US 7027977 B2) and further in view of Newsted et al (US 6016467 A).

A. Claim 1

Claim 1 is directed to a method of automatic translation of sentences from a source language L_s selected from language L_1 to L_n to a target language L_t selected from languages L_1 to L_n comprising the steps of: (i) providing grammars G_1 to G_n of all the languages L_1 to L_n respectively, in which each grammar is unique to that particular language, and a text 'S' in the source language L_s as inputs; (ii) creating a unified grammar specification UG for the grammars G_1 to G_n ; (iii) separating the input text 'S' in the source language L_s into a list of tokens using a lexical analyser for

the source language L_s ; (iv) setting a current non-terminal symbol to the start symbol of the unified grammar specification UG ; (v) obtaining a set of grammar production rules P_e from the unified grammar specification UG , which contain the current non-terminal symbol; (vi) for each unified grammar production rule P in the set of grammar production rules P_e taking each symbol one by one from a list of terminal symbols and/or non-terminal symbols corresponding to the source language grammar G_s , determining whether it is a terminal symbol or a non-terminal symbol; (vii) for each terminal symbol obtained from the previous step, which is equivalent to a corresponding symbol in the list of tokens T of the input text in the source language L_s , considering the next symbol in said list of terminal symbols and/or non-terminal symbols corresponding to the source language grammar G_s and for each non-terminal symbol E_s obtained from the previous step, repeating step (v) onwards with E_s as the current non-terminal symbol; (viii) if all the symbols in the said list of terminal symbols and/or non-terminal symbols corresponding to the source language grammar G_s match with all the symbols in the list of tokens T of the input text in the source language L_s , obtaining a list of symbols t corresponding to the target language grammar G_t from the unified grammar production rule P and for those symbols which do not match, repeating step (vi) onwards for a next unified grammar production rule P defined for the non-terminal symbol 'E'; (ix) taking each symbol one by one, from the list of symbols t corresponding to the target grammar G_t and determining whether it is a terminal symbol or a non-terminal symbol; (x) for each terminal symbol obtained from the previous step outputting the symbol, and considering the next symbol and for each non-terminal obtained from the previous step, obtaining another unified grammar production rule P corresponding to that non-terminal symbol and repeating the previous step with the new unified grammar production rule, till all the symbols in the list of symbols t corresponding to the target language grammar G_t are exhausted.

Williams arguably teaches about using speculative parsing to process complex input data. Moore arguably teaches indexing productions for use in a left-corner chart parser which parses input text containing input symbols. Newstad et al. arguably teaches a method and apparatus for program development using a grammar-sensitive editor.

However, none of the applied art, alone or in combination, does not disclose, teach or suggest steps of “(i) providing grammars G_1 to G_n of all the languages L_1 to L_n respectively, in which each grammar is unique to that particular language, and a text 'S' in the source language L_s as inputs” and “(ii) creating a unified grammar specification UG for the grammars G_1 to G_n ”.

Applicant believes that the applied art teaches only a single language and a grammar thereof, but it does not teach a united grammar specification of all equivalent productions from two or more grammars. In claim1, it is possible to translate sentences from any of the two or more source languages to any of two or more target languages.

Accordingly, since the applied art does not disclose, teaches or suggests the features of claim1, withdrawal of this rejection and allowance of the claim is respectfully requested.

B. Claim 2

As to dependent claim 2, it is respectfully submitted that since claim 2 depends on claim 1, it is allowable for at least the reasons that claim 1 is allowable, and it is further allowable by reason of the additional limitations set forth therein.

IV. Conclusion

In view of the following arguments, all the claims are believed to be in condition for allowance over the prior art of record. Therefore, this response is believed to be a complete response to the Office Action. However, Applicants reserve the right to set forth further arguments supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers. Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

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Amendment dated November 28, 2007
Reply to Office Action of August 28, 2007

Docket No.: DAD-0012

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. DAD-0012 from which the undersigned is authorized to draw.

Dated: November 28, 2007

Respectfully submitted,

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